



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

RB H4713
Job Sheet 173189



QC2

Part No: RB H4713

Job Qty: 2 ea

Part Name: Drain Hose



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 2/26/18

Job Tracking No:

Due Date: 3/9/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG RB H4713 Rev 4 IPP Rev A 18.02.23 New issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	2 Ea		3/8/18	0.00	0.00	Start Up Small Fab-4		
100	Small Fab	2 pcs		3/9/18	0.00	0.25	Small Fab-9		
110	QC	2 pcs		3/9/18	0.00	0.00	QC5		
130	Packaging	2 pcs		3/9/18	0.00	0.00	Packaging3-2		
140	QC21-FG	2 Ea		3/9/18	0.00	0.00	QC21		

43

Part Op 100 - Assemble and pack as per DWG.
Descriptions: 130 - Identify and Stock

21 MAY 29 2018
9-89

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
2044T47	Tube Ø1.09	.7000 ft (.35 ea)	90-Start up Operation	5016490
2044T67	Cap Ø1.09	4 Ea (2 ea)	90-Start up Operation	5051497
51495K116	COUPLING 1/2" NCKL PLTD BRASS PUSH TO CONNECT TUBE FITTING COUPLING	2 Ea (1 ea)	90-Start up Operation	5032754
K010-0608	Hose Ø1/2 OD x Ø3/8 ID x 12-1/2ft	12 ft (6 ea)	90-Start up Operation	5045014
PAD210	Foam Ø1 X 1	.0140 sf (.007 ea)	90-Start up Operation	5021250
RB H4713-1 Drain Hose Body		2 Ea (1 ea)	90-Start up Operation	5070398
9263K642	O-Ring	2 Ea (1 ea)	90-Start up Operation	5009684



Container No: S074999



Part: RB H4713

Job No: 173189

Serial No/Batch: S074999

Revision: 4

Inspector:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

ations

Required	Inventory	Allocated
1	36	0
4	40	0
2	28	0
2	17	0
12	208	0
0	15	0
2	0	0

Date: 05/28/18

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Part Specifications

Specifications could not be found.

Plex 2/26/18 3:56 PM Dart.lajeunesse.marie

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

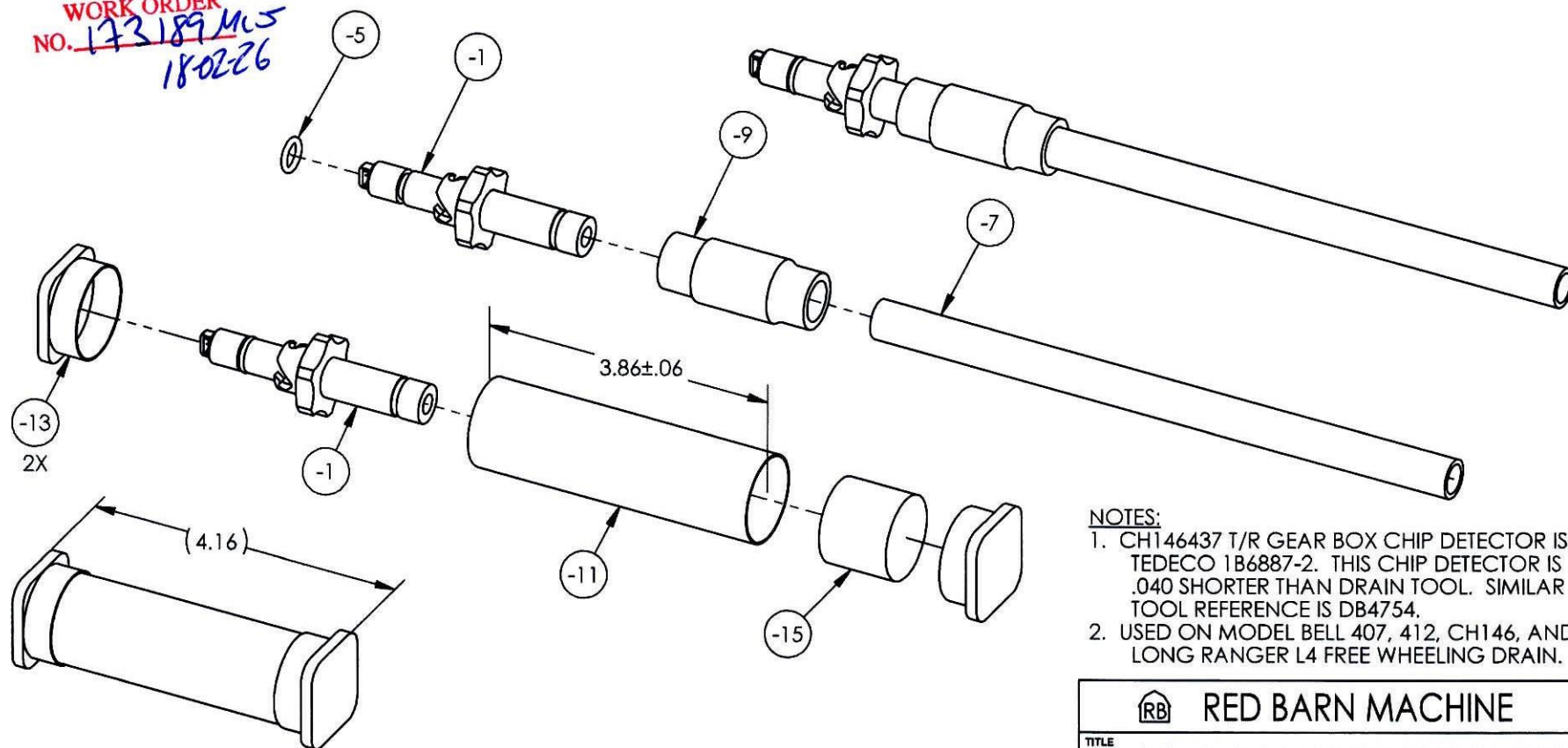
Work Order update only ☐

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				Lead hand / Supervisor Approval Verification	
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Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 173189 M/S
18-02-26

REVISIONS				
REV	DESCRIPTION	DATE	INITIAL	APPROVED
1	CHANGED HOSE LENGTH FROM 24 in. TO 6 ft.	4/15/08	WP	RW
2	DELETED -3 COLLAR, & ADDED -9 CLAMP. REFORMED DIMENSIONS, ADDED NEW DRAWING FORMAT AND ASSY VIEW.	5/20/08	WP	RW
2A	ADDED NOTES & CH146 TO MODELS USED ON. ALSO ADDED ALTERNATIVE O-RING. ADDED -11 SHRINK WRAP & MARK TOOL NO.	8/10/09	WP	DW
2B	ADDED LONG RANGER INFO IN MODEL USED ON	12/3/09	WP	DW
2C	CH'D TOOL NUMBER FROM H4713 TO RB H4713	10/7/10	RJC	RW
3	MODIFIED -1 TO USE WITH COUPLING. ADDED COUPLING & SPONGES. REMOVED HOSE CLAMP & SHRINK WRAP. ADDED -13, -15, -17. EXPLODED VIEWS, UPDATED BOM. INCREASED STEM LENGTH FROM .80 TO 1.35, REMOVED BARB ADDED GROOVE.	7/24/2012	JAG	SE
4	-1 CH'D ANGLE OF LOCK GROOVES SEAT WAS 60° IS 90°. CH'D DIM'S WAS .125 IS .125 +.005 -.000 $\pm$.090, WAS $\varnothing$.250 $\pm$ 3.07 IS $\varnothing$.25 $\pm$ 3.07 MAX. DELETED 6X .11, (.244), (.096). ADDED NOTES WAS .50 IS .50 NO ENGRAVING. CH'D DIM WAS 6X R.38 IS 6X R.38 EQUALLY SPACED ON $\varnothing$ 1.60 B.C.. CH'D NOTE WAS ENGRAVE T/N IS ENGRAVE T/N, S/N, "MADE IN USA". -11 LENGTH FROM 3.97 TO 3.86. -15 CH'D MATERIAL WAS MCMaster-CARR #7271T32 IS NEW PIG CORP. #PAD210.	2/12/14	DPD	GE



NOTES:

1. CH146437 T/R GEAR BOX CHIP DETECTOR IS TEDECO 1B6887-2. THIS CHIP DETECTOR IS .040 SHORTER THAN DRAIN TOOL. SIMILAR TOOL REFERENCE IS DB4754.
2. USED ON MODEL BELL 407, 412, CH146, AND LONG RANGER L4 FREE WHEELING DRAIN.



RED BARN MACHINE

TITLE			
TRANS. & GEAR BOX DRAIN TOOL			
DWG NO.	RB H4713		REV 4
MATL	DRAWN BY: ROBERTS		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES			APPROVED <i>D Weil</i>
.XXX $\pm$.005	FRACTIONS $\pm$ 1/32		HEAT TREAT
.XX $\pm$.01	ANGLES $\pm$ 5°		FINISH
.X $\pm$.1	SPEC		USED ON MODEL
1. BREAK ALL SHARP EDGES .015 x 45°	NOTE 2		
OR .015R			
2. DIMENSIONAL LIMITS APPLY AFTER PLATING			
SCALE 1:2	DATE 8/29/2000	SHEET 1 OF 2	

ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	PG.
			-1	1	BODY	6061	$\varnothing$ 1-1/8 X 3-1/4	2
		B/O	-5	1	O-RING	VITON	2-011N70 OR MCMaster-CARR #9263K642	1
		B/O	-7	1	HOSE	VINYL	$\varnothing$ 1/2 O.D. x $\varnothing$ 3/8 I.D. x 6ft KURT-TECH #K010-0608	1
		B/O	-9	1	COUPLING	NICKEL-PLATED BRASS	$\varnothing$ 1/2 MCMaster-CARR #51495K116	1
		B/O	-11	1	TUBE	POLYETHYLENE	$\varnothing$ 1.09 MCMaster-CARR #2044T47	1
		B/O	-13	2	CAP	VINYL	$\varnothing$ 1.09 MCMaster-CARR #2044T67	1
		B/O	-15	1	FOAM	POLYESTER/POLYURETHANE	$\varnothing$ 1 X 1 NEW PIG CORP. #PAD210	1

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